

**GAO**

**Report to the Chairman, Committee on  
Finance, U.S. Senate**

**November 1991**

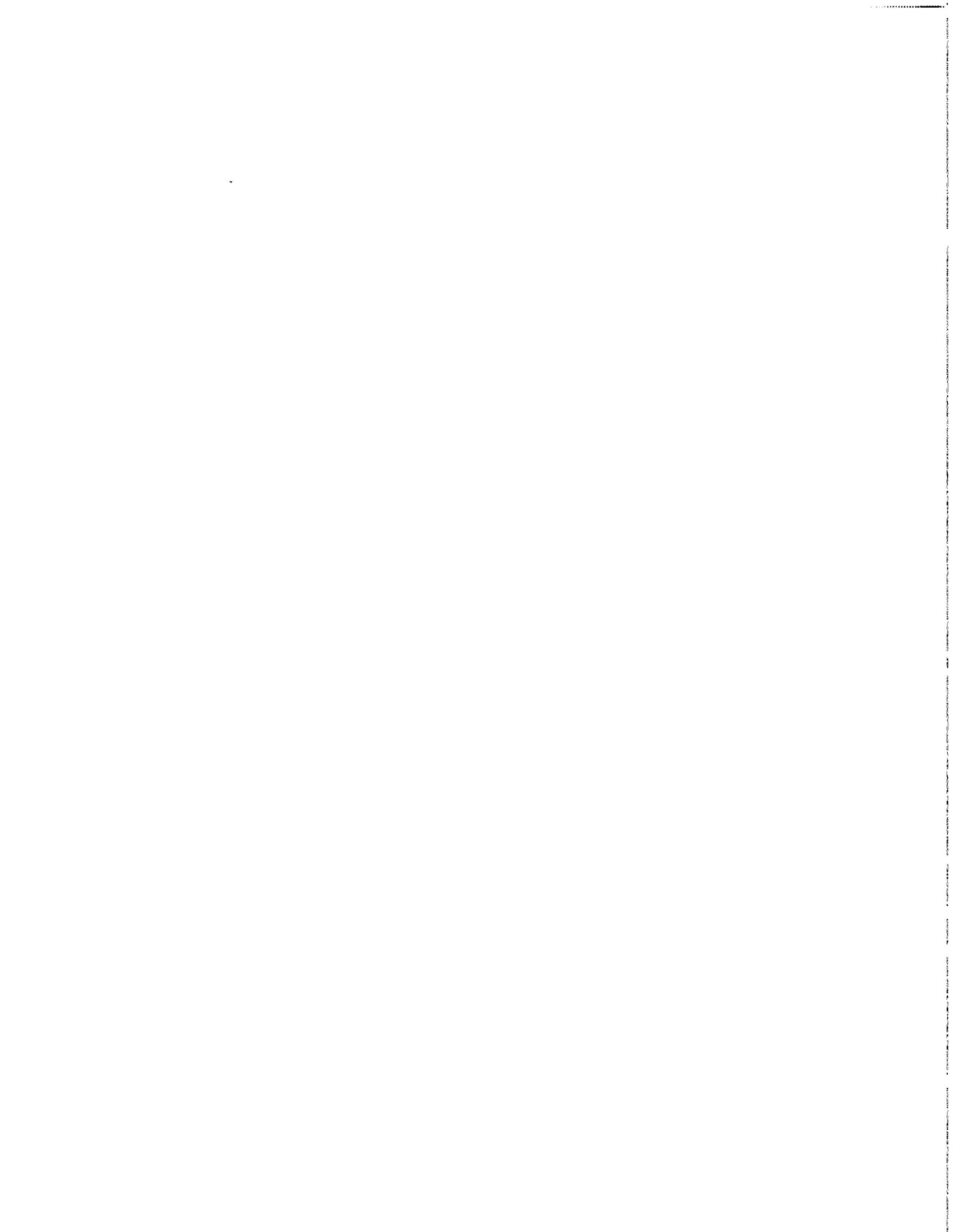
**U.S. - MEXICO  
TRADE**

**Survey of U.S. Border  
Infrastructure Needs**



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Washington, D.C. 20548

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National Security and  
International Affairs Division

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November 27, 1991

The Honorable Lloyd Bentsen  
Chairman, Committee on Finance  
United States Senate

Dear Mr. Chairman:

As you requested, we have reviewed current and projected U.S. border infrastructure needs associated with increased U.S.-Mexican trade. This report provides information on such needs as inspector staffing, inspection facilities, highways and bridges, and coordination in border management and planning efforts. Our interim study was entitled U.S.-Mexico Trade: Concerns About the Adequacy of Border Infrastructure (GAO/NSIAD-91-228, May 16, 1991).

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies to the Customs Service; the Immigration and Naturalization Service; the General Services Administration; the International Boundary and Water Commission; the Department of State; the highway departments of Texas, New Mexico, Arizona, and California; and other congressional committees. Copies will also be made available to others on request.

Please contact me at (202) 275-4812 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix I.

Sincerely yours,

Allan I. Mendelowitz, Director  
International Trade, Energy, and  
Finance Issues

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# Executive Summary

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## Purpose

Trade and commercial traffic between the United States and Mexico have grown significantly in recent years. The capacity of existing border infrastructure to accommodate traffic is being strained, and anticipated expansion of trade is expected to intensify traffic pressures at the border. Ongoing negotiations aimed at establishing a North American Free Trade Area have raised concerns about the adequacy of infrastructure along the U.S.-Mexican border.

The Chairman of the Senate Finance Committee asked GAO to review the adequacy of the southwest border infrastructure at current and projected levels of trade. More specifically, GAO obtained information on (1) current and anticipated staffing requirements of the U.S. Customs Service and the Immigration and Naturalization Service (INS); (2) the General Services Administration's (GSA) planning for border inspection facilities needs; (3) estimates for border highways and bridge projects and associated costs in Texas, New Mexico, Arizona, and California; and (4) coordination in border management and planning efforts.

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## Background

The principal U.S. agencies involved in inspections and clearance at border crossings are Customs and INS. GSA is responsible for constructing and managing the physical border inspection facilities in response to inspection agency requirements. State and local governments are responsible for constructing and maintaining highways and roads affected by border traffic, and international bridge projects are typically initiated by border communities.

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## Results in Brief

Models used by Customs and INS to assist them in determining border staffing needs indicated that both agencies required additional inspector staff along the U.S.-Mexican border. Based on fiscal year 1990 work load, the models showed that Customs and INS required over 2,500 inspectors at the border, nearly 700 more than were authorized. Furthermore, as border traffic increases, the models indicated a proportional increase in the need for inspectors. Thus, if traffic increases by 100 percent, the two agencies would be expected to need a total of about 5,000 inspectors along the border. However, the models have serious shortcomings that call into question these results.

The ongoing Southern Border Capital Improvements Program was initiated by Congress to renovate and expand many border inspection stations. Upon completion of this program GSA believes that the major border inspection facilities should be able to accommodate existing

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levels of traffic. A GSA model indicates the six largest border stations should also be able to accommodate commercial traffic increases of up to 100 percent. However, this model cannot be used to reliably predict the capability of each and every southwest border station.

According to transportation officials in the four southwest border states, highway projects needed to meet current border traffic levels would cost about \$2.1 billion, and trade growth of 100 percent would lead to increased needs costing an additional \$505 million.

Efficient border operations require the coordination of a number of entities, including various U.S. agencies, state and local governments, and Mexico. GAO's review identified some of the problems that can occur because of inadequate coordination. A number of parties have recommended steps to improve border management.

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## Principal Findings

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### Inspector Staffing Requirements

An insufficient number of Customs and Immigration inspectors is the primary obstacle to the efficient operation of southwest border crossings, according to most officials GAO interviewed along the border. Both agencies have models to assist in their assessment of border staffing needs. The Customs and INS models, however, are not adequate to accurately measure how many inspectors are currently needed or to reliably project how many would be needed in relation to trade increases. Therefore, the estimated needs are not precise; however, they are the best available and indicate the order of magnitude of the need.

The Customs Service has two models in use. Both models showed that Customs needed more than the 1,188 inspection staff authorized in fiscal year 1990—276 more according to one model and 555 more according to the other. In fiscal year 1991 Customs allocated 370 more inspector positions for the U.S.-Mexican border, but many of these positions had not yet been filled. The INS model indicated that 412 additional inspectors were needed along the southwest border in fiscal year 1990. INS inspector staffing along the southwest border has remained unchanged since 1988 at 640 positions. Assuming that border traffic increases in proportion to increases in the volume of trade, the models indicated that a 100-percent trade increase would raise Customs' needs to 2,928 inspectors and INS' needs to 2,103.

Customs and INS also identified the need for additional border station support staff, and both agencies reported significant problems with recruiting and retaining staff along the border.

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### Border Facilities

A GSA commercial inspection facilities capability model indicated that, upon completion of the Southern Border Capital Improvements Program, the six largest commercial facilities along the border should be able to accommodate truck traffic increases of 100 percent. However, at this time the model cannot be used to reliably predict the facilities' capability at southwest border stations.

While GSA has a number of planning mechanisms for specific border inspection facilities, repair or expansion needed in many facilities along the border did not take place until the Capital Improvement Program was enacted by Congress in 1988. This program earmarked funds specifically for southern border inspection facility projects. Barring any similar new congressional actions, future requirements along the U.S.-Mexican border will have to compete with other federal projects under the GSA's regular planning process.

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### Border Highway and Bridge Needs

The highway departments of states along the U.S.-Mexican border—Texas, New Mexico, Arizona, and California—have identified highway projects needed to meet current and increased levels of border traffic. Their estimates for current needs varied significantly. Texas, where there are the most border crossings, estimated that it would cost \$2 billion to meet its current capacity needs. New Mexico projected that it would cost an estimated \$39 million to provide access roads to two new border crossings. Arizona estimated that it would cost \$81 million to upgrade three of its five major border routes. California indicated that its existing highways are currently adequate.

To meet projected commercial traffic increases in the border area, Texas estimated it would need an additional \$125 million to upgrade certain highways to adequately support a 100-percent increase in trade. New Mexico estimated additional highway costs of \$157 million at a 100-percent increase in trade, and Arizona estimated additional costs of \$90 million. California estimated that highway projects associated with such a trade increase would cost \$133 million.

Local communities initiate and fund construction of international bridge projects, although all bridges crossing the U.S.-Mexican border must be

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approved by the federal governments of both countries. The estimated costs for international bridge projects currently active along the Texas-Mexican border total \$40 million, according to the Federal Highway Administration and the International Boundary and Water Commission. Associated access roads not included in the Texas state highway plan would cost an estimated \$26 million.

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## Coordination Issues

A number of entities have indicated that a lack of adequate coordination exists in border operations. Members of the business community familiar with border issues have pointed out the need for a comprehensive borderwide management plan.

GAO's review indicated the following:

- Although INS and Customs share equal responsibility for primary inspections at the border, these agencies have not provided equal numbers of inspectors at the southwest border facilities. The lack of coordination creates an imbalance that interferes with the agencies' compliance with their 50/50 staffing agreement.
- The GSA's planning process relies on information from inspection agencies, but the input provided on personnel to be assigned to border stations is a projection and not a guaranteed staffing commitment. Consequently, new or expanded inspection facilities at the border often face staffing shortfalls.
- Differing operating procedures between U.S. and Mexican agencies contribute to underutilization of border inspection facilities in some cases.

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## Recommendations

This report contains no recommendations.

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## Agency Comments

As requested, GAO did not obtain official agency comments on this report. However, responsible program officials were consulted during the review, and their views were incorporated where appropriate.

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Abbreviations

CIP	Capital Improvements Program
FHWA	Federal Highway Administration
FTA	Free Trade Agreement
GAO	General Accounting Office
GATT	General Agreement on Tariffs and Trade
GSA	General Services Administration
IBWC	International Boundary and Water Commission
INS	Immigration and Naturalization Service

# Introduction

As trade between the United States and Mexico has increased in recent years, commercial traffic along the border has also grown significantly. Northbound commercial trucks and railcars processed at the border increased by approximately 64 percent from 1986 to 1990, according to U.S. Customs Service data. Among the principal reasons for this increase were (1) the liberalization of Mexican markets following Mexico's accession to the General Agreement on Tariffs and Trade (GATT)<sup>1</sup> in 1986 and (2) the expansion of the maquiladora industry in recent years.<sup>2</sup> This increase in trade has strained the capacity of U.S. inspection agencies and existing border infrastructure. Further expansion of commerce as a result of an anticipated free trade agreement between the United States and Mexico is expected to intensify traffic pressures at the border.

The border between the United States and Mexico extends for more than 2,000 miles from the Gulf of Mexico in the east to the Pacific Ocean in the west. As of May 1991 there were 40 border crossings—24 in Texas, 2 crossings in New Mexico, 8 crossings in Arizona, and 6 in California (see fig. 1.1).

## Entities Involved in Border Operations

The principal inspection agencies, Customs and the Immigration and Naturalization Service (INS), share responsibility for the movement of people and goods across the border. There are four Customs Districts<sup>3</sup> along the U.S.-Mexican border. Three of these districts (Laredo, El Paso, and Nogales) are part of Customs' Southwest Region, which is responsible for Texas, New Mexico, and Arizona. The San Diego District is part of Customs' Pacific Region and has responsibility for California crossings. The U.S.-Mexican border is also served by two INS regions. Border crossings in Texas and New Mexico are part of the INS' Southern Region with border districts headquartered in Harlingen, San Antonio, and El Paso, Texas. The Western Region is responsible for Arizona and California crossings with district headquarters located in Phoenix, Arizona, and San Diego, California.

<sup>1</sup>GATT is an organization of more than 100 participating nations. Its goal is to raise standards of living, ensure full employment, and expand real income and effective demand through nondiscriminatory reductions of barriers to trade.

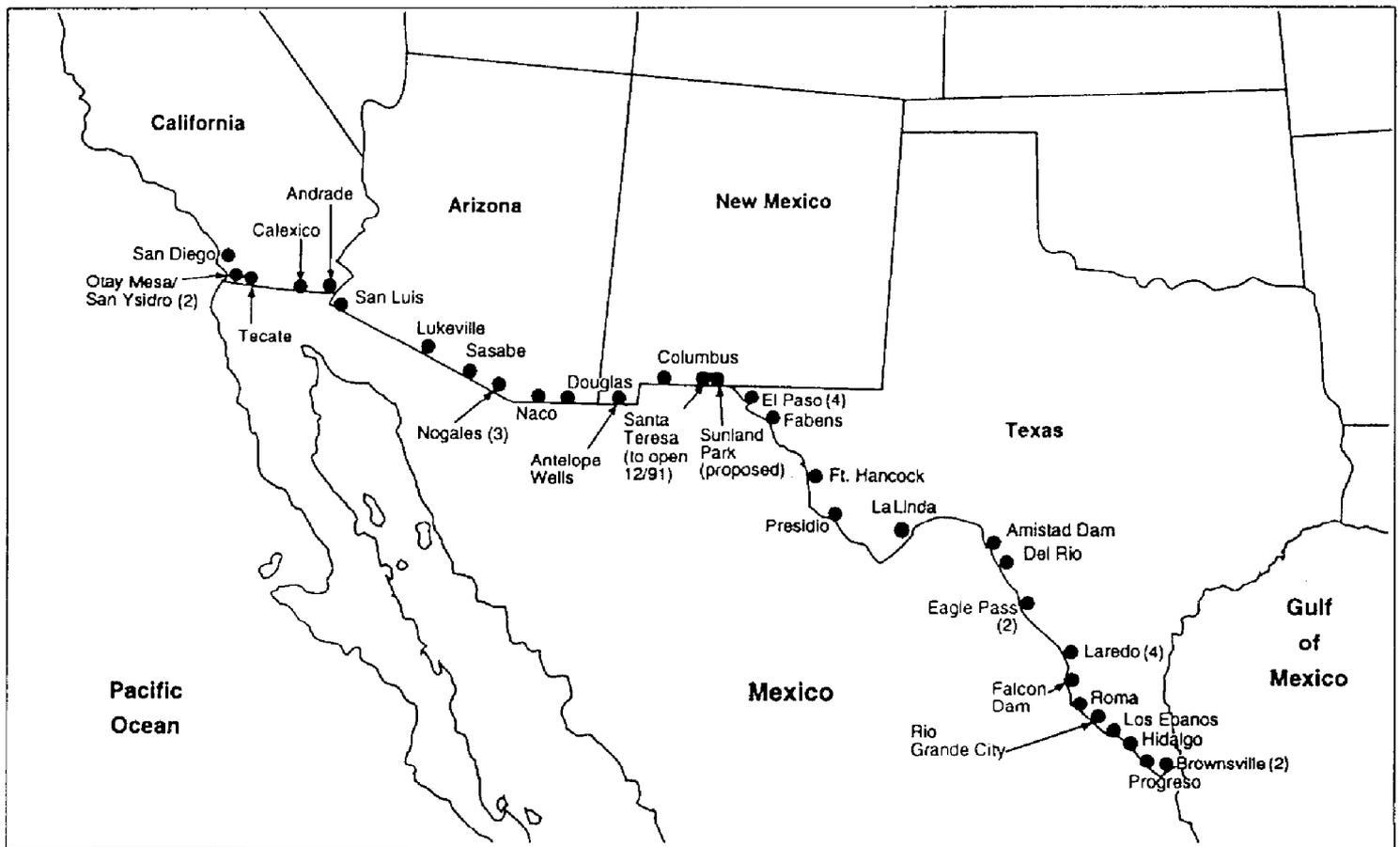
<sup>2</sup>The Mexican government established the maquiladora program in 1965 to generate economic development along Mexico's economically depressed border with the United States. Under the program, plants may import raw materials, components, and machinery free of Mexican import duties, with the stipulation that plants export most of their products.

<sup>3</sup>For both Customs and INS, a district contains several ports of entry. A port of entry may in turn represent one or more border crossings and could also include an airport or seaport.

The General Services Administration (GSA), which is responsible for constructing and managing physical inspection facilities, has two regions along the U.S.-Mexican border. GSA Region 7 covers Texas and New Mexico, and Region 9 is responsible for Arizona and California.

The Department of State issues bridge permits and acts as the liaison between the United States and the Government of Mexico. The Department of State also coordinates an Interagency Committee on Bridges and Border Crossings that meets four times a year with its Mexican counterparts to discuss issues on specific border projects. State and local governments are responsible for highways and roads affected by border traffic, and international bridge projects are typically initiated by border communities.

Figure 1.1: U.S.-Mexican Border and U.S. Crossings



Sources: U.S. Customs Service, Immigration and Naturalization Service, General Services Administration, Department of State, and Texas State Department of Transportation

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## Trade Liberalization and Expansion of U.S.- Mexican Trade

In 1986 Mexico joined GATT in an attempt to find new markets for its products. Upon joining GATT, Mexico also had to open its own markets to foreign products by reducing tariffs and eliminating nontariff barriers to trade. One result has been a significant expansion in trade with the United States. Mexico is the U.S.' third largest trade partner. Between 1986 and 1990 the total value of trade between the two countries increased by 97 percent, from \$29.7 billion to \$58.6 billion. Most of this trade is carried out across the 2,000-mile-long land border.

The development of the maquiladora industry was also a major factor in increased U.S.-Mexican trade. Nearly 25 percent of U.S. trade with Mexico is associated with the maquiladora industry, according to the Commerce Department. Almost all maquiladora plants are located along the U.S.-Mexican border. During the 1980s the maquiladora industry experienced rapid growth. The number of maquiladora plants increased from 620 in 1980 to 1,800 in 1990.

In June 1990 President Bush and Mexican President Salinas de Gortari issued a joint statement agreeing to pursue negotiations leading to a free trade agreement.<sup>4</sup> While the actual provisions of a free trade agreement are still under discussion, the general objectives were identified in the presidents' joint statement. This statement called for (1) comprehensive elimination of tariffs and nontariff trade barriers, such as import quotas and licensing requirements; (2) protection of intellectual property rights; (3) procedures for fair and prompt resolution of trade disputes; and (4) expansion of the flow of goods, services, and investment between the two countries.

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## Concerns About Border Infrastructure

Most experts agree that a free trade agreement would further increase trade between the United States and Mexico. Anticipating such an agreement, many concerned parties have questioned how an expanded flow of commercial traffic across the border would be handled. In May 1991 we reported the concerns raised by private sector groups and federal, state, and local government officials.<sup>5</sup> Some of these concerns dealt with

- the capability of federal agencies to staff border inspection facilities,

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<sup>4</sup>In February 1991 Canada joined Mexico and the United States in trilateral negotiations to achieve a North American Free Trade Area.

<sup>5</sup>U.S.-Mexico Trade: Concerns About the Adequacy of Border Infrastructure (GAO/NSIAD-91-228, May 16, 1991).

- the adequacy of inspection facilities to accommodate commercial traffic, and
- the adequacy of the road and highway infrastructure at the border.

## Objectives, Scope, and Methodology

At the request of the Chairman of the Senate Finance Committee, we obtained information on (1) Customs' and INS' current and anticipated staffing requirements; (2) GSA's planning for border inspection facilities needs; (3) estimates for border highways and bridge projects and associated costs in Texas, New Mexico, Arizona, and California; and (4) coordination in border management and planning efforts. As part of this effort, we visited selected border areas to obtain comments from officials of federal agencies, state and local officials, and the border trade community regarding shortages in inspector staffing and other border infrastructure needs.

We reviewed three staffing models that sought to predict the number of inspectors required along the U.S.-Mexican border—one from INS and two from Customs. We focused on inspector staff but also considered other job series within Customs and INS, such as import specialists, that may have related duties at border crossings. We did not validate or verify the data contained within the models, such as work load measures and actual staff levels.

We eliminated those parts of Customs' Southwest Region model that looked at non-land-border functions, such as work load at sea and airports. We also adjusted the work load ratios to ensure that the land-border work load was evenly shared between Customs and INS, and only applied those ratios to the work load done by Customs.

Although the model was developed by Customs' Southwest Region, we applied it to Customs' San Diego District, which is in the Pacific Region. The work load standards that were developed by the Southwest Region, therefore, do not reflect any uniqueness in the California crossings or the input of Pacific Region management.

Customs' Management Analysis and Systems Division used a queuing model to justify a request to Congress for 555 additional inspectors. Customs officials would not provide us with access to this model, only to its results, because they claimed that the model was the property of one of its employees, not the property of Customs. Furthermore, Customs did not collect data on cargo for use with the queuing model. We have

included the results of this model only because Customs used it to justify staffing increases.

INS did not give us its model, but rather provided the factors that make up the model. We then recreated the model using these factors and data on work load and staffing provided by INS. The replicated model was based on equal sharing of the work load in accordance with the agreement between INS and Customs on staffing.

Estimates of current and future staff needs are based on the assumption that the work processes, the type of work Customs and INS currently do, traffic make-up and patterns, Occupational Safety and Health Administration rules, union agreements, and the physical facilities all would remain unchanged. We did not look at the possibility that U.S. agencies could make processing more efficient or faster. Furthermore, we did not evaluate what impact supplying additional resources on the southwest border would have on other Customs and INS activities.

Because we had no reliable predictions upon which to project future growth, we had to assume that trade growth translated directly and equally to traffic growth of all types (i.e., a 100-percent growth in trade equalled a 100-percent growth in truck, private vehicle, and pedestrian traffic across the board).

To understand GSA's process for planning border inspection facilities, we reviewed the legislative history of GSA's Southern Border Capital Improvements Program (CIP), as well as correspondence and manuals associated with carrying out that program. We also reviewed general planning documents provided by GSA regional officials in San Francisco, California, and Fort Worth, Texas. We had discussions with officials from these offices and GSA headquarters in Washington, D.C. We also obtained information from Customs, INS, and Department of State officials familiar with the planning of border facilities and the development and implementation of the Southern Border CIP.

We reviewed the results of a Commercial Inspection Facilities Capability Model developed jointly by GSA's Region 7 and Customs' Southwest Region in 1989. GSA provided us with results of the model for the six largest commercial inspection facilities along the southwest border. These results were based on historical growth rates and on four hypothetical scenarios of growth under a free trade agreement with Mexico leading to a 10-, 25-, 50-, and 100-percent increase in traffic over a 10-year period. The model is based on the projected capacity of these

facilities once expansions under the Southern Border CIP are completed. We did not independently verify GSA's facilities capability model nor the data for the variables used in the GSA model.

We asked Texas, New Mexico, Arizona, and California highway departments for data on projects needed to meet current needs and future border traffic levels based on our four levels of assumed trade growth. We did not verify the accuracy or completeness of the information that the state highway departments gave us. Because no analysis was available showing how increases in trade would translate into increases in vehicular traffic, the states' calculations were based on the professional judgment of the highway departments and the limited historical data they had available.

We spoke with local and regional officials along the southwest border to obtain their local transportation plans and priorities. Information on current bridge projects in Texas was obtained from the Federal Highway Administration's (FHWA) Texas Division and the International Boundary and Water Commission (IBWC). We also spoke with academicians and business groups to obtain their views on border highway and bridge needs and priorities.

We conducted our review from June 1991 through October 1991 in accordance with generally accepted government auditing standards.

As requested, we did not obtain agency comments on this report. However, responsible program officials were consulted during the review, and their views were incorporated where appropriate.

# The Need for Additional Inspectors

The primary obstacle to the efficient operation of southwest border crossings is an inadequate number of Customs and Immigration inspectors, according to most of the officials we interviewed along the border. These officials consider the shortage of inspectors to be the main cause of long waits to cross the border into the United States, as we discussed in our May 1991 report. However, neither Customs nor INS has an adequate method for determining staffing needs.

Both Customs and INS have developed and are continuing to develop models to assess inspector staffing needs. None, however, is currently sufficient to reliably measure how many inspectors will be needed. The Customs Service has two models; both models showed that Customs needed more than the 1,188 inspectors authorized for its southwest border districts in fiscal year 1990—276 more inspectors according to one model and 555 more derived from the other. Customs added 370 inspector positions to the southwest border in fiscal year 1991 based on instructions in a Senate Appropriations Subcommittee report. The INS model indicated that INS needed 412 more inspectors than the 640 authorized for the southwest border in fiscal year 1990. INS did not receive any new positions in fiscal year 1991.

The number of Customs and INS inspectors needed to support expanded trade would increase in direct proportion to the assumed rate of trade growth, when calculated with our modifications to the INS model and the Customs allocation model. For example, assuming 100-percent trade growth, Customs' allocation model indicated that the number of Customs inspectors needed for the southwest border would double from 1,464 to 2,928. Similarly, the INS model indicated the number of inspectors needed for its southwest districts would increase from 1,052 to 2,103. The reliability of these estimates, however, is clouded not only by problems with the models, but also by the lack of data relating trade growth to changes in the models' work load measures. We assumed that trade growth translated equally to traffic growth for trucks, private vehicles, and pedestrians.

Customs and INS officials also said they needed more support staff. Both agencies said they had difficulty recruiting and retaining staff along the border.

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## Work Load and Staffing

Staffing levels for Customs and INS inspectors have not kept pace with increases in work load along the southwest border. For example, the INS' work load increased by 49 percent from 1986 to 1990 (along both the

northern and southern land borders) while permanent staffing has increased by only eight inspector positions, less than a 1-percent increase. INS' Southern Region has not received any additional permanent positions since 1983. Customs has fared better. From 1981 to 1990 the number of on-board Customs inspectors along the southern border has gone up by 63 percent. Work load, however, has been increasing dramatically. In commercial processing, work load has increased by 169 percent from 1981 to 1990, while the number of land passengers processed has gone up by 26 percent. In fiscal year 1991 Customs allocated 370 additional positions for the southwest border, a 31-percent increase from fiscal year 1990 levels.

Both Customs and INS use various means to bridge the gap between increased work load and staffing shortfalls. Customs allows its inspectors to work overtime, which effectively increases the size of its staff. Also, Customs uses part-time, occasional employees, known as WAEs (While Actually Employed), to supplement their regular staff during busy periods (holidays, weekends, and summer). These employees can work up to 700 hours a year for Customs, and many are school teachers who usually do not work at their regular jobs during Customs' busy periods.

As noted earlier, Customs matches INS staffing at primary passenger vehicle inspection lanes and focuses the remainder of its personnel resources on its primary missions of cargo inspections and drug interdiction. Customs officials at two large ports said that they could and at one time did allot more staff to primary inspections than INS. This situation, however, caused animosity between the two agencies and redirected Customs staff away from its main responsibilities.

INS uses temporary employees to supplement its permanent inspectors. In the Laredo, Texas, and San Ysidro, California, ports of entry, 25 to 33 percent of the INS staff are temporary hires. In the Nogales, Arizona, ports of entry, temporary and part-time inspectors make up about 60 percent of the INS staff. INS officials told us that temporaries are used because they do not count against INS' congressionally mandated "full-time equivalent" ceiling.

There are, however, drawbacks to using these temporaries. They do not receive as extensive training as permanent inspectors and thus are generally limited to conducting primary inspections. According to INS officials, temporaries are low paid, receive little or no benefits, and can only

stay for a maximum of 4 years. Officials also indicated that the high turnover rate wastes INS training and other administrative resources.

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## Inadequacy of Agencies' Models

Both Customs and INS have developed and continue to devise models to assess how many additional staff they need along the southwest border. These models are used by agency management to help determine requirements and request staff. Agencywide priorities, qualitative assessments of needs, and other considerations also influence the justification of and the request for additional staff.<sup>1</sup>

Customs has two existing models that attempt to address this question; INS has one. Each model has significant problems, and none of the models can reliably measure the need for more inspector staff along the southwest border. Both agencies are currently working with outside contractors to develop more sophisticated models of southwest border operations.

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## Customs' Southwest Region Model

Customs' Southwest Region uses an allocation model primarily to justify and allocate inspector positions. The model is based on a set of work load standards of what one inspector could do in a year if he or she only took time off for annual and sick leave and for training. For example, the model provides that one inspector can inspect 153,636 vehicles per year. In reality, each inspector would likely examine pedestrians and cargo, as well as inspect some lower number of vehicles.

The model's work load standards are based on what regional and district officials think is reasonable; the standards are subjective assessments made by experienced inspectors using some historical data. The standards are updated every 6 months to reflect changes in laws, procedures, or other factors that may affect operations along the border. Also, the standards may change due to special enforcement initiatives that Customs may be implementing. The primary advantages of this model are that the standards (1) have been updated within the past year and (2) are based on the situation along the U.S.-Mexican border.

The Southwest Region Model, with some modification, showed that the four Customs districts along the U.S.-Mexican border needed a total of

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<sup>1</sup>For a broader discussion of INS management of staffing resources, see Immigration Management: Strong Leadership and Management Reforms Needed to Address Serious Problems (GAO/IGD-91-28, Jan. 23, 1991).

1,464 inspectors to handle land border operations in fiscal year 1990. However, 1,188 inspectors, or 276 less than indicated by the model, were authorized for those districts. A small number of those inspectors were assigned either full time or part time to sea or airport activities. While the model had not yet been updated to reflect fiscal year 1991 work load, Customs allocated 370 additional positions for the southwest border. Officials in three of the four Customs Districts told us that they had an adequate number of authorized positions in fiscal year 1991.

Table 2.1 shows by Customs District how many inspectors were needed in fiscal year 1990 to meet the standards in the model and how many will be needed at assumed levels of trade growth.

Table 2.1: Customs' Inspector Staffing Requirements

Customs district	Authorized inspectors fiscal year 1990	Inspectors needed according to the model				
		Fiscal year 1990	At assumed trade increases (percent)			
			10	25	50	100
San Diego	366	477	525	596	716	954
Nogales	172	186	205	233	279	372
Laredo	400	477	525	596	716	954
El Paso	250	324	356	405	486	648
<b>Total</b>	<b>1,188</b>	<b>1,464</b>	<b>1,610</b>	<b>1,830</b>	<b>2,196</b>	<b>2,928</b>

Source: GAO calculations based on Customs' model.

### Problems With the Model

Though this model is the best model available at Customs, it has some significant problems. The main problem concerns the work load standards. Customs does not collect data on how much time inspectors spend on various functions at a port. Thus, the measure of how much of any one function an inspector could theoretically perform over the course of a year has to be estimated rather than derived from empirical data.

Based on calculations done by the San Diego District (in Customs' Pacific Region), the work load standards in the Southwest Region Model do not correspond to work performed in the San Diego District. For example, the model uses a standard of one inspector per 363,636 pedestrian inspections, while the San Diego District calculates that on average, one of its inspectors can perform 635,000 pedestrian inspections per year. For cargo processing, the model allows one inspector per 4,900 merchandise releases per year, but officials in the San Diego District calculate that an inspector averages over 7,000 releases at Otay Mesa, California,

while in Calexico, California, the average is about 1,000 releases per year.

In addition, inspectors may not be constantly busy, so that work load could increase, if it were more evenly distributed, without needing more inspectors. For example, Mexican Customs will often release trucks from its export lots in batches rather than separately as they finish processing. This situation creates substantial and unpredictable variations in U.S. Customs' work load.

The model has not been adjusted to allow a minimum number of staff at small crossings. Even though work load may not be sufficient to justify a particular staffing level, a minimum number of inspectors must be assigned to each shift, not only to keep the border crossing open but also to have at least two inspectors per shift for safety reasons, Customs officials told us.

The model does not take into account the fact that INS inspectors perform half of the work load at primary vehicle and pedestrian inspections, though the model did make some attempt to do so. Because Customs had not corrected for this factor properly in the model, it showed that Customs needed 592 inspectors above the fiscal year 1990 authorization, while our analysis indicated that only 276 more inspectors were needed.

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### Customs' Queuing Model

Customs originally requested 500 additional inspectors for the southwest border for fiscal year 1991 based on a qualitative assessment of staffing needs. The Treasury Department, Customs' parent agency, requested that Customs do a more quantitative assessment to support the need for increased staffing. Customs then used the Queuing Model to justify the 500-position increase.

The Queuing Model, as applied by Customs' Management Analysis and Systems Division, calculated that 236 additional inspectors were needed for primary vehicle processing at the five largest ports. Because this estimate was close to the number developed in its qualitative assessment, Customs assumed that the Queuing Model validated that study. Therefore, Customs determined that 555 additional positions were needed by combining the results of the Queuing Model with the 319 additional positions originally identified for other functions. The latter included vehicle processing at the smaller ports along the border, cargo inspections at all 22 ports, and "other mandated requirements."

Customs' Queuing Model was developed during nonworking hours by a current Customs employee more than 10 years ago, according to Customs officials and the employee. This employee claimed proprietary ownership of the model, and we were not provided access to it. Thus, we could not verify or validate whether the model performs as intended. Our observations on the model are based on interviews and a demonstration of how the model works.

The model indicates how long the maximum waiting time will be, given the number of primary inspection lanes open at that time. Data on when and how many vehicles arrive and how long it takes to process those vehicles drive the model. Customs stipulated a "30/30 rule"—30 seconds for processing each vehicle and a maximum waiting time of 30 minutes—when it ran the model. As used by Customs to justify more staff, the Queuing Model has several problems.

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### Problems With the Model

Customs collected data for the Queuing Model for passenger vehicles only at the five largest southwest border ports on a Thursday through a Sunday in September 1990. From that data, Customs extrapolated to the other 17 ports along the border. Data from 4 days in 1 month may not provide reliable data on the number of lanes that need to be open year-round or the number of inspectors needed. Traffic varies greatly from day to day, and traffic flow from Monday through Wednesday may not be similar to that on Thursday and Friday. Officials at Customs headquarters believe that traffic in September is representative of 10 months of the year (all but July and August when traffic is particularly heavy). Customs officials along the border, however, said that June is also a heavy traffic period, along with the weeks around Christmas, Easter, Cinco de Mayo, and other major holidays. They also said that at these times the type and amount of processing that needs to be done (i.e., tourists versus the usual daily commuters) varies significantly from the rest of the year.

Customs extrapolated data from the five largest ports to the other 17 ports along the border based on the results of the original qualitative study. While the Queuing Model appeared to validate the original study for large ports, it does not follow that it would necessarily do the same for smaller ports. The latter are generally less efficient than larger ports, according to Customs officials, because traffic is not as steady. Therefore, the work load at these smaller ports could increase without requiring more staff. Customs is collecting data for these smaller ports

so the Queuing Model could be used to develop justification for determining staff needs.

The Queuing Model also assumed that vehicles would arrive at relatively regular intervals. However, Customs did not collect data on the arrival patterns. A more realistic arrival pattern considers that vehicles arrive in batches because of such things as traffic lights and toll booths. When this pattern is taken into consideration, the model would tend to understate staffing requirements and would make it difficult to always satisfy a desired maximum waiting time.

The 236 positions for vehicle processing that were clearly derived from the Queuing Model are also suspect because of how the model was implemented. For the few hours a day when the average processing time for a half-hour period exceeded 30 seconds, Customs used the actual processing time. For periods when average processing times were equal to or less than 30 seconds, it used 30 seconds. By excluding actual average processing times less than 30 seconds, the model overstates Customs' staffing requirements.

The method Customs used to translate increases in lane hours to staff requirements is problematic. It simply multiplied the percentage increase in lane hours resulting from the Queuing Model by the number of inspector positions at a given port. This method ignores the possibility of shifting schedules or moving inspectors around to open more lanes when needed, rather than simply adding more staff. Also, the factor used for calculating the number of inspectors actually on board and doing primary vehicle inspection was only a rough estimate because Customs does not have a system to track which inspectors are performing which functions at a port.

## INS' Land Border Staffing Model

INS has one model, the Land Border Staffing Model, for determining staffing needs along the land border. It calculated that 1,052 inspectors were needed along the southwest border, 412 more than were authorized. INS did not provide us with the model because it is under development. INS did provide us with the elements and factors that make up the model so we could replicate it.

INS' model is based on the average time it takes to process an applicant, defined as any person seeking to enter the United States through a port of entry. Based on nationwide work load statistics, it takes an average of 12.3 seconds to process an applicant at large ports (over 2-million

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applicants per year) and about 43.5 seconds at smaller ports. This processing time is for primary vehicle and pedestrian processing only.<sup>2</sup> INS would like to increase the processing time by 20 percent, to 14.76 seconds, at larger ports for better enforcement, such as more thorough inspection of documents.

The model provides that, based on average processing times and the average amount of time an inspector is doing primary inspections per day (3.5 hours), an inspector can inspect 221,951 applicants per year at large ports and 75,276 applicants at smaller ports. These ratios are not comparable to ones used by Customs, which separately counts cars, trucks, pedestrians, and cargo loads.

The model uses the number of inspectors needed for primary inspection work to estimate the number needed for all other functions at the port. It stipulates one supervisor for every eight inspectors at large ports and for every six at smaller ports.

The INS model indicated that a total of 1,052 permanent, full-time inspectors were needed along the southwest border in fiscal year 1990, or 412 more than the 640 inspectors that were authorized for the five border districts. With an average cost of \$47,200 per inspector per year (which includes salary, benefits, uniform allowance, etc.) these additional inspectors would cost about \$19.5 million a year. Table 2.2 shows the number of authorized INS inspectors, the number the INS model indicated were needed in fiscal year 1990, and how many inspectors would be needed at assumed levels of trade growth.

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<sup>2</sup>All people entering the United States go through an initial screening, known as primary, which usually lasts less than a minute. If there are no problems, they may enter the country. If the inspector determines that there may be a problem, the person or persons may be referred to what is known as "secondary" for a more detailed inspection. Depending on what the problem is, they will be referred to Customs, INS, or Agriculture.

Table 2.2: INS' Inspector Staffing Requirements

INS district	Authorized inspectors Fiscal year 1990	Inspectors needed according to the model				
		Fiscal year 1990	At assumed trade increases (percent)			
			10	25	50	100
San Diego	200	367	404	459	551	735
Phoenix	78	148	163	185	222	296
Harlingen	116	166	183	208	249	332
San Antonio	121	166	183	208	249	332
El Paso	125	204	224	255	306	408
<b>Total</b>	<b>640</b>	<b>1,052</b>	<b>1,157</b>	<b>1,315</b>	<b>1,577</b>	<b>2,103</b>

Source: GAO calculations based on INS' model.

## Problems With the Model

INS officials acknowledge that the model lacks the necessary sophistication to make it reliable. INS has hired a contractor to develop a new model that INS says will address many of the problems described below.

One of the main problems with the Land Border Staffing Model is that it lumps very different types of applicants together. Processing a pedestrian may take a few seconds, while a car with one person in it may take 20-30 seconds. By lumping these different types of applicants together the model does not allow for the different work load patterns at the various ports. For example, a high percentage of applicants at Nogales are pedestrians because both Nogales, Arizona, and Nogales, Mexico, are right on the border. San Ysidro, California, on the other hand, has a high percentage of applicants in private vehicles because the closest major city, San Diego, is several miles from the border. Ideally, the model should account for this difference. For example, Nogales would receive fewer inspectors for a given number of applicants than would San Ysidro because pedestrians can be processed quicker than applicants in automobiles.

Another major problem is that the model is designed for and based on statistics from both borders—Canada and Mexico. Both INS and Customs recognize that there is a large difference between operations at the two borders for two main reasons: (1) Canadian applicants do not need visas, whereas Mexicans need one of several types of visas or visa-like documents; and (2) Mexico is a major source country for illegal narcotics and undocumented workers, thus requiring more inspectors for enforcement operations.

The factor used in the model to determine the number of nonprimary inspectors is problematic because considerable differences exist in the kinds and amount of other work done at various ports of entry. For example, El Paso processes a majority of Mexicans immigrating to the United States and, therefore, the model will understate the need for inspectors because all immigrants undergo secondary inspections.

As with Customs' Southwest Region model, INS' allocation model is based on average processing times. Such models assume work load is evenly distributed throughout the day, but because it is not, work load could increase without needing more inspectors.

INS recognizes that there are certain efficiencies derived from having a busy port. Therefore, the model has a longer average processing time for small ports because inspectors sometimes have to wait for another car or person to arrive. Thirteen, or 38 percent, of the southwest border crossings are considered smaller ports. INS acknowledges that small ports are less efficient and could experience a doubling of traffic without needing more inspectors. In fact, traffic could theoretically almost triple before more inspectors were needed in small ports, based on the work load standards INS uses at the two different sized ports. Therefore, the estimates in table 2.2 for the number of inspectors needed as trade grows are somewhat inflated. For example, under a 100-percent trade growth, the model suggests INS would need 2,103 inspectors. However, small ports account for 110 of those positions, so INS might only need 1,993 positions.

Even though the model allows for a smaller applicant-per-inspector ratio at smaller ports, the resulting number of inspectors may still be insufficient to run the port. For example, the model shows that the Los Ebanos, Texas, crossing needs three inspectors. Depending on how many hours the crossing is open and how many sick days, annual leave, or training days inspectors take, four or more inspectors may be needed just to keep it open. Some crossings are too distant to permit support by another port for unplanned absences, such as illness. INS may need to set a minimum number of inspectors for smaller ports.

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## Support Staff Needs When Inspectors Increase

Both Customs and INS identified a need for more support staff, such as clerks, computer specialists, and import specialists. In Laredo, INS inspectors were doing routine clerical work such as collecting fees, writing out receipts, taking photographs for border-crossing cards and other documents, and doing data entry. The inspectors on duty said they

sometimes do not have enough staff to permit a second person to verify fees, as required for internal control purposes.

At Customs in Laredo, they have had a 5-year freeze on hiring clerical staff, while inspection staff has grown by 34 percent. Officials there also cited problems with separation of duties regarding fee collection. At INS in El Paso, most of their clerical help was part-time student aides.

At the Port of San Ysidro, an INS official said they have problems hiring clerks and other support staff because the salaries are too low compared to the cost of living in the San Diego area. He said that they have to rely on either student aides or inspectors who are temporarily disabled or are pregnant to fulfill administrative duties.<sup>3</sup>

The Customs District in San Diego would like to have 1 support staff per 28 inspectors, while the current ratio is 1 to 37. Due to the lack of support staff, inspectors sometimes perform clerical and security functions, which detracts from Customs' enforcement mission, according to a Customs official.

Import specialists, who process all of the paperwork, fees, and data associated with the importation of goods, are also overworked, according to Customs officials. In Laredo, they told us that import specialists should be doing about 5,000-6,000 entries per year but are having to do about 12,000 per year because of staff shortages. Currently, we are working with Customs to develop an import specialist allocation model as part of our general management review of that agency.

## Problems Recruiting and Retaining Staff

Simply authorizing and funding more positions will not solve all of the staffing problems along the border. Both Customs and INS, along with community and business leaders, are concerned about the agencies' ability to hire and retain staff along the southwest border.

A widespread concern has been the length of time it takes from announcing a position to actually bringing a person on board. One delay involves the background and suitability check process. Recruiting and processing a new hire usually takes 6 months and often longer. In El Paso, an INS official said it took 6 months to complete a background

<sup>3</sup>Pregnant women are not allowed to do primary inspection of vehicles because of the emissions from the automobiles.

check on a 17-year-old student aide and 8 months for a time and attendance clerk. A Customs official in El Paso said that, because of the lag time in hiring, the port will not have new personnel on board to staff the expanded Zaragosa facility when it opens in April 1992. Frequently, people that were selected have found other jobs in the interim.

Another problem for INS is that headquarters "locks" positions once they become vacant. Regional offices must go through a cumbersome process to request that positions be unlocked, according to Southern Region officials. Headquarters would not unlock any positions during the last half of fiscal year 1991 because of funding problems, and it eliminated 17 vacant positions from the Southern Region. Some positions, such as the Port Director for Hidalgo, Texas, were critical. The Port Director in Laredo said that the policy of locking positions has led to a vacancy rate of 15 to 20 percent for inspectors and almost 50 percent for temporary positions. Similarly, INS' San Diego ports of entry had a 20-percent vacancy rate until headquarters eliminated 21 vacant positions. An INS headquarters official told us that, in fiscal year 1992, regional and district offices will be responsible for managing their positions subject to allocated funds.

Once the agencies have hired inspectors they have a hard time keeping them. Customs' Southwest Region filled 289 new positions after a recent intensive recruiting campaign. However, during that period, 100 inspector positions were vacated, thus requiring additional recruiting.

Both INS and Customs said most border station inspectors they lose move to other areas within the agencies, often for promotions. INS and Customs are currently working together to move the career ladder for inspectors from GS-9 to GS-11 and to have inspectors designated as law enforcement officers so they can qualify for a 20-year retirement.

Retaining staff from outside the border region is also a serious problem. One INS official in Texas said INS assumes new hires from outside the area will either quit or transfer relatively quickly because of the harsh climate and different culture. Other officials and border business leaders echoed this sentiment.

People from the border region are not only familiar with the climate and culture, but also frequently speak Spanish, a requirement for INS inspectors and a desirable skill for Customs inspectors along the U.S.-Mexican border. Some agency officials are worried that putting an inspector in

the position of having to stop, search, and perhaps arrest a relative or childhood friend is either unfair to the inspector or may compromise his or her integrity. Most of the people we spoke with along the border downplayed this concern. They said this problem was not endemic to the people that live along the border. Rather, it is a question of hiring people with integrity and good moral character no matter where they are from.

To alleviate concerns, some parties we spoke with suggested that someone hired in Laredo, for example, could work in McAllen, close by but unlikely to put an inspector in the position of knowing a lot of the people that come through the crossing. Likewise, one port director suggested the problem would be limited to small, isolated towns, such as Presidio, Texas, where hiring locals may be a concern because they really do know everybody in the town.

To solve the turnover problem, the Border Trade Alliance has suggested that the agencies require a mandatory minimum stay of 2 to 3 years as a condition of employment. A Customs official agreed such a requirement would be a good idea, but said that enforcement would be difficult because of hardship transfers.

# Adequacy of Physical Inspection Facilities

The physical plant at larger border inspection facilities will be able to accommodate existing and future traffic flows, according to a GSA facilities capability model. Although it may require some modifications, GSA's model is a good attempt to evaluate the capabilities of large facilities. We have some reservations about the validity and reliability of the model to predict capability in all situations.

Our May 1991 report outlined concerns expressed by federal officials and business groups about the adequacy of existing border inspection facilities to accommodate the current flow of commercial traffic. The Southern Border Capital Improvements Program, enacted by Congress in 1988, was intended to respond to these concerns by providing for renovation, expansion, and construction of border inspection facilities along the U.S.-Mexican border. Under the CIP, funds were earmarked specifically for southwest border inspection facility projects and were not subject to the GSA's regular planning process. If facility requirements are identified in the future along the U.S.-Mexican border, they will have to compete with other federal projects under the GSA's regular process.

## The Southern Border Capital Improvements Program

In the mid-1980s it was evident that many inspection facilities needed upgrading or expanding and that new facilities were required in some locations along the U.S.-Mexican border. In 1986 Customs initiated an internal survey of facilities' needs for the largest border stations along the southwest border. The survey findings prompted the Senate Committee on Appropriations to request that GSA and Customs assess improvements needed at facilities along the U.S.-Mexican border and prepare a program of replacement, repair, renovation, or retrofit. In addition, the Committee asked INS, the Department of State's Office of Mexican Affairs, and the Department of Agriculture to prepare a list of border facilities most in need of repair.

In fiscal year 1988 Congress designated a portion of the GSA's available funds for work on the southwest border stations under the CIP. The CIP funds cover 51 projects along the entire southwest border. Projects include pedestrian, passenger, and commercial vehicle processing and inspection facilities. They are scheduled to be completed around June 1994.

## Results of GSA's Region 7 Commercial Inspection Facilities Capability Model

According to GSA officials, once the CIP is completed, the inspection facilities along the U.S.-Mexican border should be able to accommodate both existing traffic and projected increases under a free trade agreement over the next 10 years. GSA Region 7 and Customs' Southwest Region worked together to develop a Commercial Inspection Facilities Capability Model in 1989. This model is being used as a planning tool by GSA's Region 7 to identify the optimum size of an inspection facility and to project when an inspection facility will reach maximum capacity.

The model relies on a number of variables to determine the capability of a facility. Variables include the volume of truck traffic, the hours the port is fully operational, the percentage of time spent on truck compliance and narcotics examinations, and the average waiting times for primary processing. The model results suggest that all of the six major ports of entry along the U.S.-Mexican border will be able to accommodate a 100-percent increase in truck traffic over a 10-year period beginning in 1991. However, truck traffic at some ports, such as El Paso and Laredo, is growing at rates that will be higher than 100 percent over 10 years.

Table 3.1 presents the results of the GSA's facilities capability model for the six largest commercial ports of entry along the U.S.-Mexican border. The number of dock spaces used for each port of entry is the number of spaces that will be available upon completion of the CIP. Truck traffic projections were based on historical growth over the last 3 to 5 years and compared to a hypothetical 100-percent increase over a 10-year period.

Table 3.1: Capacity of Selected Southwest Border Ports to Accommodate Traffic Growth

Facility	Projected number of years until border ports reach maximum capacity	
	Based on historical traffic growth <sup>a</sup>	Based on 100-percent traffic growth over 10 years <sup>b</sup>
El Paso area, Texas	11	15
Brownsville area, Texas	34	24
Laredo area, Texas	10	24
Nogales, Arizona	22	22
Calexico, California	49	32
Otay Mesa, California	25	28

<sup>a</sup>Actual percent growth is based on the volume of truck traffic coming through the ports in the last 3 to 5 years. Growth rates are as follows: El Paso, 10 percent; Brownsville, 5 percent; Laredo, 18 percent; Nogales, 7 percent; Calexico, 5 percent; and Otay Mesa, 8 percent.

<sup>b</sup>GSA used an annual growth rate of 7 percent to calculate a 100-percent increase over 10 years.  
Source: GSA.

Although the model shows that the facilities at all six ports are adequate to accommodate traffic for at least 10 years, GSA officials noted that facilities could be made obsolete overnight by changes in inspection agencies' operations. For example, if Customs significantly increased the number of secondary inspections, current facilities might not be able to accommodate the number of trucks to be inspected at one time.

## Problems With the Model

While the model allows GSA to estimate the capacity of specific commercial inspection facilities, it is not appropriate for use in making projections for the entire border. We noted, and the GSA official in charge of developing the model agreed, that some of the formulas and assumptions used in the model are not appropriate. For example, the model assumes that trucks entering the border ports of entry during off hours are processed immediately, when in fact many locations do not process trucks that arrive after hours until the next business day.

Also, the model is based on work load and traffic figures that GSA believes to be significantly above average. Therefore, facilities would reach their maximum capacity later than the model projects if GSA's assessment of the work load is accurate.

In calculating the number of lanes that should be built at a given facility, the model rounds the number of lanes to the nearest whole number. Thus, if the calculation resulted in a need for 2.3 lanes, the

model would show it as 2 lanes. A planner with a thorough understanding of the operations and other outside factors affecting an inspection facility may know that three lanes are needed. An analyst with less background may not know how to manipulate the model and would accept the results without question. GSA does not have a user's manual to help interpret the model.

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## GSA's Planning Mechanisms

GSA designs, finances, and awards contracts for constructing and renovating border inspection facilities. In general, facilities requirements are based on tenant agencies' input and regular GSA reviews. In addition, GSA plans for specific border inspection projects by asking inspection agencies to prioritize their border needs. To implement the CIP, GSA established interagency task forces to plan and schedule specific projects. GSA officials noted that any new border inspection facility projects will return to the GSA's regular planning process once the CIP is completed.

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## GSA's Facilities Planning Process

GSA has a regular planning process to identify and implement needed capital improvement projects for federal buildings.<sup>1</sup> Rent payments received by GSA from the tenant agencies<sup>2</sup> are deposited into the Federal Buildings Fund, a revolving account from which all operating expenses and capital projects are funded. All building capital investment projects expected to cost over \$1.6 million compete for money from this fund and must be specifically approved by the Office of Management and Budget and the Congress.

GSA regional offices initiate the facility planning process by obtaining federal tenant agencies' input on their building and space requirements. The regional offices develop planning studies to meet tenant agency needs and consider alternatives to satisfy the facility requirements. Subject to funding limits and headquarters guidance, GSA regional offices decide which capital improvement projects under \$1.6 million will be funded. GSA regional offices propose larger projects to the GSA's internal Planning and Project Review Board.<sup>3</sup> These projects compete for the

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<sup>1</sup>These projects include many different types of federal buildings and building space occupied by federal agencies, including courthouses, warehouses, and border inspection facilities. For a discussion of some of the GSA's problems in managing this program, see Long-Term Neglect of Federal Building Needs (GAO/T-GGD-91-64, Aug. 1, 1991).

<sup>2</sup>GSA views federal agencies that occupy federal government buildings as "tenants" or "clients."

<sup>3</sup>Large projects involve new construction and repair and alteration projects costing over \$1.6 million, and repair and alteration work over \$800,000 on leased facilities.

GSA's Federal Buildings Fund monies and are selected based on various evaluation criteria. The criteria include the degree to which the project strategy achieves the GSA's goals, the immediacy of need, and the economic merit of a project. Those selected are incorporated into the GSA's national plan.

As part of the facilities planning process, GSA also identifies needed capital improvement projects in existing federal buildings through Building Evaluation Reports. These reports are formal physical inspections scheduled on every federal building owned by GSA at least once every 5 years. Results of these inspections are used to identify any needed building repair and modernization.

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### Border-Specific Capital Improvement Projects

In addition to the regular facilities planning process, GSA annually requests that each border inspection agency—Customs, INS, and the Department of Agriculture—develop a priority list of the top 10 capital improvement projects desired for both northern and southern borders. Representatives from the agencies meet to discuss desired projects and attempt to coordinate their requests so that the lists are similar. GSA then plans for these project requests 2 fiscal years into the future. A GSA official stated that due to limited resources, GSA tends to implement only those projects agreed to by all inspection agencies.

GSA regional officials also noted that they regularly communicate with federal, state, and local officials and representatives of the border business community to discuss their concerns about inspection facilities requirements. GSA officials also participate in the U.S. Interagency Committee on Bridges and Border Crossings and are present at bilateral meetings with Mexican authorities, which take place four times during the year. GSA regional officials attend local public meetings coordinated by Customs and conferences held by private sector groups to get feedback on the implementation of their capital improvement projects. For example, according to GSA regional officials, they regularly attend conferences sponsored by the Border Trade Alliance to present an update on the status of various projects and to listen to the group's concerns.

Upon enactment of the CIP, GSA regional offices responsible for the southwest border—Regions 7 and 9—developed management plans to implement the program. These plans, which differed slightly in the two regions, established interagency task forces to officially discuss and plan specific projects and a schedule of projects to be completed. The task forces include representatives from GSA, Customs, INS, and the

Department of Agriculture. GSA staff also meet with their Mexican counterparts in the Secretaria de Desarrollo Urbano y Ecologia on an ad hoc basis, to coordinate such issues as the actual location of inspection facilities.

The CIP projects were mandated by the Congress and, according to GSA officials, did not have to compete with other federal building projects under the GSA's regular planning process. GSA officials note that once the CIP is completed, any other capital improvement needed along the border will return to the normal planning process and compete with other federal projects. GSA regional officials questioned whether all future inspection facility projects along the southwest border will have a sufficient priority to be funded under the GSA's current planning process. For example, they indicated that smaller border station projects are less likely to receive as much attention as high visibility federal buildings, such as courthouses. According to a GSA headquarters official, only about 40 percent of all facility projects proposed by the regional offices are approved and funded.

# Border Communities See Need for Highway and Bridge Improvements

The transportation departments of the four border states—Texas, New Mexico, Arizona, and California—have identified the extent and estimated cost of the highway projects they believe are needed to meet current and projected levels of border traffic. Their estimates varied significantly. Texas estimated that it would cost \$848 million for Border Region Projects and \$1.2 billion for Texas Highway Trunk System Projects in the border region, for a total estimated cost of \$2 billion to adequately meet current border traffic needs. New Mexico projected that it would cost an estimated \$38.6 million to meet its current border highway needs, and Arizona's estimate was \$80.5 million. California indicated that its existing highways are adequate to service current border traffic levels.

We asked all four states' transportation departments to identify future highway needs associated with scenarios of projected trade growth—10-, 25-, 50-, and 100-percent growth in trade over 10 years—under a free trade agreement (FTA) with Mexico. Each state provided information on projected highway needs but their responses did not uniformly address the four scenarios. Texas estimated additional costs of \$124.7 million (\$49.3 million for Border Region Projects and \$75.4 million for Texas Highway Trunk System Projects in the border region) at a 100-percent increase in trade. New Mexico estimated additional costs of \$157 million at a 100-percent increase in trade, and Arizona estimated \$90.4 million. California estimated that projects to meet traffic needs at a 100-percent increase in trade would cost \$132.9 million.

Highway projects are generally the responsibility of the states, which plan and implement their own programs. Before a state initiates a highway project, it considers whether the project is eligible for federal assistance. However, many highways are built solely with state funds. If federal funds are sought, the state finances the project and then applies to the FHWA for reimbursement. The federal share of eligible project costs ranges from 75 percent to 90 percent.

International bridge projects involve only Texas, whose border with Mexico is defined by the Rio Grande River. Local communities initiate and fund bridge projects that span international borders, although all such bridges must be approved by both the U.S. and Mexican governments. The estimated cost for bridge projects currently active along the Texas-Mexican border was \$40.2 million.

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## Texas

In Texas, which has a long land border with Mexico, there are 24 border crossings. Two ports of entry, Laredo and El Paso, are among the five largest on the U.S.-Mexican border. A September 1991 Texas State Department of Highways and Public Transportation study indicated that existing highways on the Texas border are inadequate to meet current traffic needs. The study identified 53 projects needed to meet current traffic levels in the border region, at an estimated cost of \$848 million. All of these projects had been authorized and funded at least for feasibility studies. A majority had advanced to the approval stage where some level of funding was authorized for acquisition of right of way, preparation of construction plans, and construction.

The highway department also identified 26 border highway projects, part of its proposed Texas Highway Trunk System, having an estimated cost of \$1.2 billion. The Texas Highway Trunk System is a 30-year planned four-lane divided-highway system that includes and complements the interstate highway system. As envisioned, Texas' plan will provide direct access to every Texas city with over 20,000 people and also connect with major ports and entry points in adjacent states and Mexico.

To meet future FTA traffic growth on border highways, the Texas highway department study identified additional highway needs to meet traffic increases of 10, 25, 50, and 100 percent over 10 years on border highways and on the border region of the Trunk System. These additional needs include only upgrades and new construction improvements to the 79 projects identified as current needs, rather than additional highway projects. As shown in table 4.1, at a 100-percent increase in trade, improvements to border highways would cost an estimated \$897 million, or \$49 million over the cost of meeting current needs. The border region of the Trunk System would require improvements costing \$76 million more than the cost of meeting current needs.

**Chapter 4**  
**Border Communities See Need for Highway**  
**and Bridge Improvements**

**Table 4.1: Estimated Costs for Texas**  
**Border Region Highway Projects**

Dollars in millions						
Area	Number of projects	Current costs	Costs at four levels of trade increase (percent)			
			10	25	50	100
El Paso	12	\$513	\$517	\$522	\$527	\$538
Del Rio	1	9	9	9	9	9
Laredo	6	127	127	129	133	135
Rio Grande Valley	25	94	95	96	97	101
U.S. 281	9	106	107	108	110	113
Subtotal	53	\$848	\$855	\$864	\$876	\$897
Trunk system	26	\$1,180	\$1,192	\$1,207	\$1,224	\$1,256
<b>Total</b>	<b>79</b>	<b>\$2,028</b>	<b>\$2,047</b>	<b>\$2,071</b>	<b>\$2,100</b>	<b>\$2,153</b>

Notes: Current costs were based on 1990 traffic levels. Estimated cost increases were projected to the year 2000 for each of the four scenarios. These numbers are non-additive.

Numbers may not add to total due to rounding.

Source: Addendum A to Projects Potentially Impacted by Free Trade Agreement Along Texas/Mexico Border, Texas Department of Transportation (Sept. 1, 1991).

The Texas highway department evaluated its existing roadway system based on accommodating current levels of trade (using 1990 levels) over the next 10-year period (year 2000). Highway officials assumed that 100 percent of international bridge truck traffic would be trade related and that 80 percent of highway truck traffic would be trade related. The specific projects were also subjectively ranked as receiving a high, medium, or low impact from increased traffic resulting from a free trade agreement.

**Highway Needs in the El Paso Area**

The Texas plan for the El Paso area encompasses six highway projects costing an estimated \$513 million. Of this, \$139.8 million is for 10 projects ranked with high impact from a free trade agreement, \$3.2 million for 1 project with medium impact, and \$370 million for 1 project with low impact.

El Paso city officials told us that the city does not have adequate highway and bridge capacity to handle traffic congestion generated by the border crossings. IBWC officials, whose headquarters is in El Paso, confirmed the need for additional international bridge capacity. City officials stressed the priority they place, first, on having their bridges developed and operated at full capacity and, second, on developing a loop system of highways to divert commercial traffic around the city. They believe the projects will alleviate congestion, decrease downtown

air pollution, and assure that trucks transport hazardous materials outside of the downtown area. The Texas Highway Department's study shows all the loop highway projects as receiving high impact from an FTA.

### Highway Needs in the Del Rio Area

The plan for the Del Rio area includes one highway project costing an estimated \$8.9 million. It is ranked as a high impact project. This project would widen Spur 239 to a four-lane divided roadway from the International Bridge in Del Rio to U.S. 277, a 3-mile distance.

### Highway Needs in the Laredo Area

The plan for the Laredo area includes six highway projects costing an estimated \$126.6 million. Of this, \$104.8 million is for five projects ranked with high impact from a free trade agreement and \$21.8 million for one project with medium impact.

Laredo City officials told us that they have two current highway priorities. Their first is development of Mines Road (FM 1472) into a four-lane divided highway that would tie into their proposed Inner Loop, upgrading access to the new Columbia Bridge crossing. A trucking company representative told us that each lane on this two-lane farm road measures 118 inches, while her company's new trucks are 127 inches wide. She stressed that this road was currently very dangerous. The Texas Highway Department's study indicates that upgrading Mines Road will cost an estimated \$39.4 million.

Laredo's second current highway priority is development of an Inner Loop to divert traffic from the downtown area and alleviate congestion. City officials are also planning a fourth bridge to tie into the Inner Loop, which they estimate will cost \$8 million-\$10 million. The FHWA lists this fourth bridge as Laredo III, with an estimated cost of \$4.1 million for the bridge and \$2 million for access roads. The highway study includes the Inner Loop, listing it as three separate projects at a estimated cost of \$27.4 million.

Laredo also has two highway priorities for the future. The first is development of the part of the Texas Highway Trunk System that links Laredo to Corpus Christi on the Texas Gulf Coast, as part of Laredo's

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10-year plan.<sup>1</sup> The second priority is development of an Outer Loop as part of Laredo's 15-year plan. The proposed Outer Loop would also tie into a future fifth Laredo bridge, which the city estimates will cost between \$12 million and \$14 million. The Texas highway study estimates the cost of the Laredo-Corpus Christi link at \$164.3 million, categorized as a combination of four high- and three medium-impact projects costing \$124.3 million and \$40 million, respectively.<sup>2</sup> The study estimates the cost of the Outer Loop at \$21.8 million, with medium impact from a free trade agreement.

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### Highway Needs in the Rio Grande Valley Area

The plan for the Rio Grande Valley area includes 25 projects costing an estimated \$93.8 million. Of this, \$50.4 million is for 16 projects ranked with high impact from a free trade agreement and \$43.4 million for 9 projects with medium impact.

Most of these 25 projects are designed either to develop a highway that runs roughly parallel to the border, connecting the many small towns in the Valley area, or to improve access to international bridge crossings by linking them to this border highway. A Harlingen city official told us that the Los Indios Bridge, which is under construction and scheduled to open in November 1992, had been planned and discussed for 35 years. Until it opens, the closest bridges are in Brownsville and Progreso. The Los Indios Bridge will primarily serve commercial traffic because there is little population in its vicinity. The Harlingen official also stated that the city needs a new highway from the bridge to U.S.-77, the main highway out of the lower Rio Grande Valley, and a loop (Loop 590) around the southeastern edge of Harlingen to connect with its newly renovated international airport and its foreign trade and enterprise zones. The Texas Highway Department's study includes these needs as six projects having high impact from a free trade agreement and totaling an estimated \$15.2 million.

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<sup>1</sup>A Corpus Christi official told us that this project is also a high priority for his city, as a vital link of the port to Laredo and Monterrey in the Mexican interior. He stated that although Mexico is developing a privately funded toll road between Monterrey and Laredo, the U.S. side is not developing its highway links in parallel. The road between Laredo and Corpus Christi is generally two lane. He stated that the cities need a four-lane highway that bypasses the towns along the way.

<sup>2</sup>These projects are not categorized under the Laredo area but under the Texas Highway Trunk System projects.

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Highway Needs for U.S.  
281

The plan for U.S. 281 includes nine projects costing an estimated \$105.9 million. All are ranked as having high impact from an FTA. These projects will develop a major north-south corridor from Pharr on the border to I-37, which ties into San Antonio.

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New Mexico

New Mexico has two small crossings at Columbus and Antelope Wells for which existing roads are sufficient. However, a new major crossing is currently being developed at Santa Teresa, and a second major crossing has been proposed for Sunland Park.<sup>3</sup> The New Mexico State Highway and Transportation Department is developing access roads to service expected traffic levels at both crossings. The Department estimates the cost for these two projects at \$38.6 million.

New Mexico has identified six other highway projects for upgrades and new construction, estimated at \$157 million, which would be needed to meet increases in commercial traffic as a result of a free trade agreement. The total cost of all eight projects is estimated at \$195.5 million. Where projects would have to be undertaken jointly with Texas or Mexico, estimated costs are for the New Mexican portion only.

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Immediate Highway Needs

The new crossing at Santa Teresa has been officially approved by federal authorities, according to a New Mexico State Highway Department official. The crossing is expected to open on December 15, 1991, according to an El Paso Customs official. New Mexico is upgrading an existing road leading from the site of the Santa Teresa border crossing to I-10 at an estimated cost of \$25.8 million. The new Santa Teresa port of entry is expected to serve major industrial development and will form the western portion of the proposed loop route around the combined urban area of El Paso and Ciudad Juarez, Mexico.

The New Mexico Highway Department official believed that approval of the Sunland Park crossing was imminent. The Department estimates that this project will cost \$12.8 million and will provide access to the Sunland Park interchange on I-10 in El Paso. This crossing is expected to serve primarily as a commercial port.

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<sup>3</sup>Sunland Park is the small town on the New Mexico side, while Ciudad Juarez is the much larger community on the Mexican side of the border. However, this crossing is generally referred to as the Anapra crossing.

## New Mexican Highway Needs Related to a Free Trade Agreement

Estimating New Mexican highway needs associated with a free trade agreement was difficult because these needs relate almost totally to Santa Teresa and Sunland Park. Since these ports of entry have not opened and have no traffic base from which to project increases, the Highway Department based its projections on a number of assumptions. The most important assumptions were that

- there would be negligible impact on passenger traffic,
- there would be an increase in commercial traffic of around 60-70 percent of the increase in trade,
- there would be a higher proportion of total commercial traffic through ports in the El Paso/Juarez area due to the excellent connections to the national highway and rail networks of both the United States and Mexico, and
- there would be an increase in total traffic and congestion that would spread the impact to more distant ports.

The Department's projections showed no additional highway needs at a 10-percent trade increase. With a 25-percent increase, it would cost an estimated \$2.2 million to improve State Road NM-11 through the village of Columbus to provide better access for the Columbus port of entry. The Department official stated that establishing a shuttle bus service at a capital cost of \$800,000 would replace the need for additional roadways in the vicinity of Sunland Park; however, we did not include these costs.

At a 50-percent increase in trade, the Highway Department estimated that new highway projects in the vicinity of the two new crossings would cost an estimated \$50.8 million. In Santa Teresa, it would cost an estimated \$39.5 million to provide additional access to the port of entry, connecting it to I-10 at the NM-404 interchange. In Sunland Park, it would cost an estimated \$6.6 million to upgrade NM-273 to provide four lanes from the Sunland Park port to the Santa Teresa port access to I-10 at Artercraft Road. In Sunland Park, it would cost an estimated \$4.7 million to upgrade arterial roads.

At a 100-percent increase in trade, the Highway Department estimated that new highway projects would be needed for Santa Teresa, Sunland Park, and Columbus, at an expected cost of \$104 million. In Santa Teresa, it would cost an estimated \$61 million to provide additional access to the port of entry, with connections to I-10 west of Las Cruces. This upgrade would provide alternative access to traffic going west or north from the area. The Highway Department estimated that it would

cost an additional \$43 million to provide a connecting route between Sunland Park, Santa Teresa, and Columbus to help distribute demand among them. The Highway Department also included in its projections \$3 million for truck-weighing stations for collection of taxes. We excluded these costs.

## Arizona

There are six ports of entry along the Arizona-Mexican border. Nogales handles over 40 percent of all vehicle crossings from Mexico into the state, including 66 percent of all truck traffic. Two other ports, San Luis and Douglas, also receive significant traffic crossing from Mexico. The remaining entry ports—Lukeville, Sasabe, and Naco—account for less than 7 percent of the state's cross-border traffic.

## Arizona Border Traffic Projections

Based on Customs' historical trends data for commercial truck traffic for fiscal years 1988 through 1990, the Arizona Department of Transportation projected increases in commercial traffic for a 10-year period ending in fiscal year 2000. Customs data indicated there was a total of 217,109 truck entries for fiscal year 1990 for all Arizona border ports. Based on current trends alone, the Department estimated that the number of trucks entering Arizona from Mexico would increase by more than 100 percent by the year 2000, to 449,800. Table 4.2 shows current and projected fiscal year 2000 arrivals of commercial trucks for four Arizona ports.

**Table 4.2: Current and Projected Commercial Truck Arrivals From Mexico to Four Arizona Ports**

Port	Fiscal year 1990 arrivals	Projected fiscal year 2000 arrivals	Anticipated increase (percent)
Nogales	152,744	278,7000	82
San Luis	33,642	84,900	150
Naco	14,043	57,000	306
Douglas	13,779	26,300	90

Source: Arizona Department of Transportation.

The Arizona transportation study noted that the volume of border crossings would accelerate under an FTA and likely have a higher proportion of commercial trucks. While recognizing that it is difficult to predict the effects of a free trade agreement on traffic flows, the study pointed out that increased commercial truck traffic would adversely affect pavement condition, roadway safety, and roadway capacity. The study concluded that a free trade agreement could result in considerable increases

over current growth patterns. For example, an increase of 50 percent over current trends could mean that 418,000 trucks would cross through Nogales alone by the year 2000.

### Needs Assessment for Arizona Border Highways

In a 1990 report for the state legislature, the Arizona Department of Transportation evaluated the condition of the state's highway system with respect to standards for number of lanes, roadway width, roadway surface type, shoulder width, and shoulder type. The study then estimated the financial needs required to bring the system up to these standards. Table 4.3 shows the estimated costs, totaling \$80.5 million, to bring the five Arizona border routes up to design and performance standards, based on current conditions.

**Table 4.3: Cost Estimates to Bring Five Arizona Border Routes up to Desired Design Standards**

Dollars in millions		
Route	Cost under current conditions	Cost under free trade
I-19/S.R. -189	\$21.3	\$21.3
U.S. -95	33.5	116.8
S.R.-80/U.S.-666B	0	0
S.R. -85	25.8	25.8
S.R. -286/S.R. -86	0	7.0
<b>Total</b>	<b>\$80.5</b>	<b>\$170.9</b>

Note: Totals may not add because of rounding.

Source: Arizona Department of Transportation.

The Arizona Department of Transportation evaluation also assessed the cost of replacing or rehabilitating bridges and culverts on each route. It estimated the total cost at \$22.5 million under current conditions.

These cost estimates were based on the assumption that current economic ties to Mexico would remain unchanged. However, according to the Arizona Department of Transportation, a free trade agreement would significantly increase commercial truck and passenger vehicle traffic on the border routes. Such increases would require reassessing both the current design standards and the adequacy of bridges and culverts.

The Arizona Department of Transportation study on the effects of an FTA with Mexico suggests State Road 286 and U.S. Highway 95 would

require changes in design standards. Imposing a minimal design standard for State Road 286 and upgrading the standard for a section of U.S. Highway 95 would increase the cost of improving border routes to Mexico. Table 4.3 also shows that the cost of bringing each of the five Arizona border routes up to design and performance standards based on projected traffic increases under an FTA would reach \$170.9 million.

The Arizona 1992-1996 Five-Year Highway Construction Program provides for approximately \$46 million in highway projects for the five highway corridors to the Arizona-Mexican border. This figure falls short of the \$80.5-million anticipated design improvements needed under current conditions. Under a free trade agreement, the anticipated funding shortfall would be approximately \$125 million. Moreover, this figure does not take into account the requirements for bridge and culvert rehabilitation and replacement estimated at \$22.5 million.

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## California

There are six border crossings along the California-Mexican border. The port of entry at San Ysidro, just south of the city of San Diego, is the largest international border crossing in the world. While San Ysidro primarily handles passenger vehicles, the neighboring facility at Otay Mesa, approximately 10 miles east, is California's major port of entry for commercial truck traffic. In conjunction these two facilities service about 71 percent of the state's commercial truck entries from Mexico. Much of the commercial traffic in the area is related to the maquiladora industry. There is also significant commuter traffic and tourism.

The second major port of entry in the state is at Calexico, which handles about 20 percent of commercial trucks entering the state from Mexico. The remaining cross-border commercial traffic is generally routed through the port of entry at Tecate. There are two other small border facilities in California, at Andrade and at Virginia Street in San Ysidro.

California has a well-developed road and highway infrastructure along the Mexican border. This infrastructure is adequate to meet current requirements, according to state and local transportation officials.

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## California Border Traffic Patterns

According to the San Diego Association of Governments, two-way daily vehicle travel at the two border crossings in the San Diego area (San Ysidro and Otay Mesa) increased by about 53 percent between 1986 and 1990. Customs' figures show northbound commercial trucks through

these two ports increased by nearly 22 percent during this period. Corresponding Customs data for the three smaller California border crossings at Calexico, Tecate, and Andrade indicate considerable variations, but some growth, in commercial truck traffic in recent years.

**Traffic Projections and Needs Assessments for San Diego Area Border Roads and Highways**

According to the San Diego Association of Governments, combined observed vehicle travel at San Ysidro and Otay Mesa in 1990 totaled 36.2-million vehicles. The San Diego Association of Governments projects that by the year 2000 vehicle travel at these two sites will increase to 44.5 million at current levels of growth. Thus, vehicle travel at San Ysidro/Otay Mesa is expected to increase by 23 percent by the year 2000, even in the absence of an FTA.

By comparing historical trends for northbound truck arrivals collected by U.S. Customs and observed two-way daily vehicle travel, the San Diego Association of Governments estimates that approximately 5 percent of traffic at San Ysidro and Otay Mesa is trade related. Table 4.4 shows two-way vehicle traffic at San Ysidro/Otay Mesa from 1986 through 1990 and the projection for the year 2000. Table 4.4 also indicates the estimated trade-related traffic for each year.

**Table 4.4: Vehicle Traffic Between Mexico and the United States at San Ysidro/Otay Mesa, 1986-1990**

Numbers of vehicles in millions		
Year	Two-way vehicle traffic	Estimated trade-related traffic <sup>a</sup>
1986	23.8	1.2
1987	25.0	1.3
1988	30.4	1.5
1989	33.9	1.7
1990	36.2	1.8
2000 <sup>b</sup>	44.5	2.2

<sup>a</sup>Trade-related traffic is estimated at 5 percent of all traffic.

<sup>b</sup>Projected amounts.

Source: San Diego Association of Governments.

According to the San Diego Association of Governments, the existing road system in the Otay Mesa area will be overburdened by the year 2000, due to increased traffic associated with border trade and industrial development. The current border inspection facilities at Otay Mesa are being expanded under the CIP. The 1990 Regional Transportation Plan for the San Diego Region calls for extending State Route 905 as a multilane interstate freeway eastward from Interstate 805 to the Otay

Mesa inspection facility at the border. This section of the road would be four lanes at the border, expanding to six lanes just north of the facility and on to Interstate 805.

The San Diego Association of Governments notes that if this project is realized, anticipated traffic increases resulting from a free trade agreement could be accommodated, even if trade-related traffic were to increase by 100 percent. However, this project, estimated at \$117 million in 1990 dollars, has yet to be funded. FHWA has designated it as not being eligible for federal interstate highway funds.

The San Diego Association of Governments also identified State Route 125 as a route that could be extended to relieve congestion at Otay Mesa in the short run. At this time, a private consortium under contract with the California Department of Transportation is exploring the possibility of building this section of State Route 125. Current plans call for operating this road as a tollway. However, the exact route or alignment of this route has yet to be adopted.

Construction of a new border inspection facility at Otay Mesa will also have an immediate impact on local streets. The California Department of Transportation estimates that the new facility will put 1,000 trucks per day on these streets. The streets will require strengthened structural sections to accommodate this volume of heavy traffic. The California Department of Transportation estimates the approximate cost of this project at \$900,000.

## Traffic Projections and Needs Assessments for Eastern California Border Roads and Highways

Customs data indicate that in 1990 approximately 127,000 northbound trucks crossed the border from Mexico through the three California border crossings east of the San Diego area—Calexico, Tecate, and Andrade. Using Customs figures for annual truck volumes at these three border crossings from 1986 to 1990, the California Department of Transportation projected volumes of truck traffic for the year 2000.<sup>4</sup> Table 4.5 shows annual truck volumes for three California border crossings in 1990 and projections for the year 2000.

<sup>4</sup>In recent years there have been significant variations in truck arrivals through these three ports of entry. An official with the California Department of Transportation warned that for this reason projections of future volumes of traffic based on available Customs figures must be regarded as very general estimates.

**Table 4.5: Annual and Projected Truck Volumes at Three California Border Crossings**

<b>Border crossing</b>	<b>Actual northbound trucks (1990)</b>	<b>Estimated northbound trucks (2000)</b>	<b>Anticipated increase (percent)</b>
Calexico	88,687	93,178	5
Tecate	35,960	50,240	40
Andrade	2,073	2,411	16
<b>Total</b>	<b>126,720</b>	<b>145,829</b>	<b>15</b>

Source: California Department of Transportation.

Using recent trends as an indicator, these figures suggest that overall traffic through the three ports of entry will probably increase by 15 percent by the year 2000. Tecate will likely experience the most significant increase, with truck volumes growing by approximately 40 percent. However, under a free trade agreement there may be significant increases in trade over current trends.

According to the California Department of Transportation, the border crossings at Calexico or Andrade should be able to accommodate increased traffic resulting from an FTA. However, the Department anticipates that an increase in traffic of more than 20 percent through the border crossing at Tecate would cause significant problems on State Route 188 and State Route 94. Both are two-lane highways through mountainous terrain, and passing is impossible over long stretches. There are no plans for widening these roads for at least 20 years. The California Department of Transportation estimates the cost of widening the roads at approximately \$15 million.

The California Department of Transportation also noted that planned construction of a new border facility at Calexico, under the CIP, will necessitate new road construction. The site of the new facility between the international border and the All-American Canal will require construction of two or three bridges across the canal, according to the Department. No estimate was provided for the cost of building these bridges.

## International Bridge Crossings

The Texas border with Mexico is defined by the Rio Grande River, which stretches from Brownsville on the east coast to El Paso on Texas' western border with New Mexico. Almost all Texas-Mexican border

crossings are by bridge.<sup>5</sup> This situation means that some communities that straddle the river are binational. Any new bridges to be built to alleviate traffic congestion on existing bridges or promote economic development and enhanced local commerce are, therefore, international bridge crossings. They must be negotiated and approved by the governments of both the United States and Mexico.

Building a new international bridge crossing is a complicated, lengthy process involving numerous federal, state, and local government agencies. Typically, local communities initiate the process and are responsible for planning, financing, and building the new international bridge. Thus, it is not the state or federal government but local communities or private interests that finance a new international bridge. State and local governments facilitate commercial traffic by constructing and maintaining highways leading into and out of the border entry ports. Federal agencies provide the necessary facilities and inspectors when the crossing is approved and the bridge built.

The Texas State Highway Department did not include the costs associated with proposed bridge projects in its study because the state does not fund international bridge projects. However, the FHWA's Texas Division provided information indicating eight proposed bridge projects have an estimated cost of \$40.2 million. FHWA also included the estimated costs for associated access roads not included in the Texas State highway plan. These access roads would cost an estimated \$26 million.

The Bridge of the Americas in El Paso needs to be either renovated or rebuilt, according to IBWC. Renovation would cost an estimated \$1.5 million and would extend the service life of the bridge for 20 years. Rebuilding would cost about \$4 million and would extend the service life of the bridge for 50 years, according to IBWC. IBWC, one of the bridge's owners, prefers to rebuild. However, a final decision is pending negotiations and approval by the Mexican government, which owns the 20 percent of the bridge on the Mexican side of the border.

Table 4.6 lists bridge projects currently active along the Texas border. These projects have active local community sponsorship and range in status from being in a preliminary engineering phase to being under construction. Cost estimates for bridge construction are for the portion of the structure on the U.S. side of the border only.

<sup>5</sup>There are three exceptions: the crossing at Los Ebanos is by hand-pulled ferry, and there are two small crossings over IBWC-owned dams that are restricted to private vehicle traffic.

**Chapter 4**  
**Border Communities See Need for Highway**  
**and Bridge Improvements**

**Table 4.6: Cost Estimates for Eight Proposed International Bridge Crossings in Texas**

Dollars in thousands

<b>Proposed bridge</b>	<b>Estimated cost for bridge</b>	<b>Additional estimated cost for roadways</b>
1. Port of Brownsville-Matamoros (vehicular/railroad) Bridge <sup>a</sup>	\$9,000	\$3,000
2. Brownsville-Matamoros III (Los Tomates) Bridge <sup>a</sup>	8,000	0
3. Los Indios-Lucio Blanco Bridge (under construction)	774	0
4. Pharr-Reynosa Bridge <sup>b</sup>	10,000	21,000
5. Los Ebanos-Diaz Ordaz Bridge <sup>a</sup>	760	0
6. Laredo-Nuevo Laredo III Bridge <sup>a</sup>	4,100	2,000
7. Eagle Pass-Piedras Negras II Bridge <sup>a</sup>	3,560	0
8. Bridge of the Americas (Cordova St.) <sup>b</sup>	4,000 <sup>c</sup>	0
<b>Total</b>	<b>\$40,194</b>	<b>\$26,000</b>

<sup>a</sup>Federal approval pending.

<sup>b</sup>Federal approval obtained.

<sup>c</sup>Cost estimate provided by IBWC. All other cost estimates provided by FHWA. Sources: Texas Division of FHWA, and IBWC.

# The Need for Improved Coordination

Our May 1991 report discussed concerns raised by private sector and federal and local officials. These concerns involved the need for more comprehensive long-range planning that would take into account the requirements of various agencies involved in border operations. Border operations are interdependent by nature, involving services and infrastructure, such as inspectors, border stations, highways and bridges, provided by many parties. This interdependence places great demands for coordination on all the parties involved, including Mexico. In our review we learned about some problems that can occur because of inadequate coordination. A number of parties have recommended steps to improve border management.

## Customs' and INS' Staffing Imbalances

Although INS and Customs share equal responsibility for primary inspections at the border, these agencies have not received comparable increases in staff in recent years. In fiscal year 1991 Customs requested 175 new inspectors for the southwest border and subsequently allocated 370 positions. At the same time, INS requested 104 positions for both the northern and southern land borders, but the Congress did not authorize any new positions. With an agreement between the agencies to jointly staff primary inspection lanes, Customs will only open as many lanes as INS can staff. Therefore, increasing the number of Customs inspectors will not necessarily reduce waiting times for primary vehicle inspections unless INS receives corresponding staff increases. This situation is one reason for the continuing perception that staffing is the primary problem along the southwest border, despite the fact that Customs received new positions.

## Insufficient Inspector Staff for Existing or Planned Facilities

Although INS and Customs are involved with the GSA's facility planning and recognize additional staffing needs, they are often unable to fully staff the border inspection facilities. GSA officials said that in their planning process they rely on information from inspection agencies that includes the number of budgeted personnel to be housed in the space requested. However, they explained that these requests are projections and not guarantees of staffing commitments by the inspection agencies.

According to INS officials, although the inspections office in headquarters is informed of future expansion and construction of border stations, this factor is not considered when determining the INS' staffing needs. The official explained that future additional needs are not relevant since there is already a shortfall in inspector positions to staff the existing facilities. Customs officials said they regularly communicate with GSA

and considered planned facilities when determining staffing needs. However, as discussed in chapter 2, Customs' offices have a difficult time filling their authorized staffing positions.

According to data provided by Customs officials, some of the larger border inspection facilities are currently underutilized due to staffing shortages. For example, San Ysidro, the largest crossing along the U.S.-Mexican border, has 24 primary lanes. However, only 16 of these lanes are open on average during the busiest periods of weekdays. Similarly, the three inspection facilities currently serving the city of Laredo have a combined capacity of 16 primary lanes, but the maximum number of lanes open is 12.

Customs and INS officials told us they may not be able to staff newly constructed or expanded facilities under the CIP. Some Customs officials said they are not only short of inspectors to staff current facilities, but when the CIP projects are completed they may not be able to fully staff new or expanded facilities. Similarly, INS officials noted that they will have no choice but to shut down some lanes at existing facilities when new facilities planned under the CIP are completed. Several federal officials as well as other parties we interviewed said that, while the existing facilities are not being fully used due to a lack of staffing, new or expanded facilities are still being constructed.

## Coordination Problems With Other Federal Agencies

The Department of State recently consolidated its immigrant visa operations in Mexico to two cities, Tijuana and Juarez. Because of population distribution within Mexico, most Mexican citizens moving to the United States enter through the El Paso area, significantly changing the INS' work load. However, the State Department shifted its staff while INS did not make a corresponding shift of INS inspectors to reflect the changing work load at the border stations.

El Paso also has a new bridge without matching facilities and an old bridge soon to be closed or severely restricted with brand-new, expanded facilities, according to local Customs officials. Renovation and expansion of the border station servicing the Bridge of the Americas at El Paso was completed before the bridge itself was renovated. Now the bridge may need to be partially closed for renovation, and most of the traffic will be diverted to the new Zaragoza bridge, where the inspection facility is still under construction. El Paso city officials also complained about the poor coordination between IBWC, which owns the Bridge of the Americas, and GSA, which is renovating and building the facilities at the

two bridges. With 40 percent of cargo traffic in the El Paso area currently using the Zaragosa bridge, the traffic is being accommodated at the old facility without any problems, according to a GSA official. However, Customs officials in El Paso questioned whether the new facilities at Zaragosa and Santa Teresa could handle all of the cargo traffic without creating very long waits if the Bridge of the Americas is closed.

## Problems Associated With U.S.-Mexican Coordination

Coordination between U.S. and Mexican authorities is also essential to ensure efficient operation of border crossings. In some locations, differing operating procedures between U.S. and Mexican inspection agencies caused underutilization of border inspection facilities, according to Customs, INS, and local officials. For example, we were told that at many border crossings in Texas, Mexican Customs releases northbound trucks in batches, creating huge peaks and valleys in work load on the U.S. side. U.S. Customs officials in Laredo and El Paso also described problems in aligning their hours of operation with Mexican Customs. This misalignment is due to fees Mexican Customs charges to process cargo at certain times, long lunch breaks taken by the Mexicans, and the fact that Mexico does not go on daylight savings time. These factors, along with others such as shipping schedules, narrows the time when most trucks cross the border into Texas. These crossings usually occur from 4 p.m. to 7 p.m.

Another example of difficulties encountered involves the extent of coordination in providing highway infrastructure to and from the cities of Laredo and Nuevo Laredo. While I-35 provides good access to the downtown bridge from the U.S. side, on the Mexican side there are only narrow, congested city streets. However, at the new Columbia Bridge, Mexico is building a four-lane highway from Monterrey to the bridge crossing, while on the U.S. side there is only a two-lane farm road, which the local business community considers to be inadequate and unsafe for commercial traffic.

The Laredo II Bridge inspection facilities opened in 1979 with the capability of handling pedestrian traffic. However, on the Mexican side there is no corresponding capability, according to local INS officials. Thus, the pedestrian facility on the U.S. side has gone unused for over 12 years.

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## Calls for a Comprehensive Border Plan

U.S. private sector representatives noted that a comprehensive plan coordinating how growth should take place along the border is lacking. They said border planning is focused within individual communities, and no one entity considers what is happening elsewhere along the border. One official said that sometimes when international bridges are being planned, neighboring communities use the same traffic figures to justify the need for their own new bridges. Therefore, more than one community expects the same traffic to shift to its proposed bridge from another existing bridge to pay off its construction costs. Furthermore, with several U.S. communities vying for new crossings, Mexico is often left in the position of deciding on the crossings' location, according to federal and state highway officials.

A borderwide plan could facilitate coordination among U.S. and Mexican authorities and better align operations and the infrastructure on both sides of the border. Although the Interagency Committee on Bridges and Border Crossings meets on a regular basis with its Mexican counterparts to discuss current and future implementation of specific capital improvement projects, this group has not addressed borderwide issues. It also does not have the authority to commit resources, according to committee members. Only IBWC has jurisdiction all along the border, but its authority is generally limited to addressing irrigation, sewage treatment, and other water issues.

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